REMARKS

Claims 1-36 were pending at the time of the Final Office Action. In the Final Office Action mailed on December 20, 2007, the Examiner took the following action: (1) rejected Claims 1, 5-7, 11, 21, 25-26, and 29 under 35 U.S.C. §103(a) as being unpatentable over Kramer (U.S. 6,466,539), in view of Lu (U.S. 7,269,133); (2) rejected Claims 2-4 and 22-23 under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Qian (U.S. Pub. 2005/0030926); (3) rejected Claims 8 and 27 under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Engels (U.S. Pub. 2004/0213174); (4) rejected Claim 9 under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Lu, and further in view of Ishida (U.S. 5,170,473); (5) rejected Claims 10 under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Kim (U.S. 6,064,554); (6) rejected Claims 12, 24, and 28 under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Lu, and further in view of Ohyama (U.S. 4,794,595); (7) rejected Claims 13-14, 16-17, 19-20, and 31-34 under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Ohyama; (8) rejected Claims 15 and 18 under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Ohyama, and further in view of Kim; (9) rejected Claims 30 and 36 under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu and Ohyama, and further in view of Lewis; and (10) rejected Claim 35 under 35 U.S.C. 103(a) as being unpatentable over Kramer in view of Lu and Ohyama, and further in view of Engels. 1, 3-4, 12-13, 15, 21, 23-24, 28, 31-32, and 34-36 are amended. Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

I. Rejections under 35 U.S.C. §103(a)

Kramer (U.S. 6,466,539)

Kramer discloses a serial bus system with two data connected at one end to a central bus subscriber and an active bus subscriber. (Column 5, Lines 8-12). The central and the active bus subscriber transmit status messages over the bus lines. (Column 4, Lines 9-14). In case of missing status messages or error in the status messages, the central bus subscriber brings the bus system into a fail-safe state. (Column 4, Lines 28-31).

Lu (U.S. 7,269,133)

Lu discloses a IS-IS system that includes a redundant IS-IS protocol instance, the redundant IS-IS protocol instance can seamlessly assume the function of the active IS-IS instance in the event of active MCP failure. (Column 1, Lines 35-40).

Ohyama (U.S. 4,794,595)

Ohyama discloses an Office Channel Equipment (OCE) and a Data Circuit terminal Equipment (DCE) that transmits the voice and data by multiplexing them. (Column 2, Lines 40-50). When power is no longer supplied to the DCE, the telephone equipment and exchange are connected directly by bypassing the main part of the DCE and OCE. (Column 2, Lines 35-40).

Claims 1, 5-7, and 11

Claims 1, 5-7, and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu. Claims 5-7 and 11 depend from Claim 1. Claim 1, as amended, recites:

1. A method in a data processing system having a plurality of nodes operatively connected to a network having a plurality of busses, the method comprising:

transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network;

determining whether the first message was received by the other of the nodes on the first bus; and

when it is determined that the first message was not received by the other of the nodes, transmitting a recovery command to the other of the nodes on a second of the plurality of busses,

wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that s*ends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Applicants traverse the rejection. First, as noted in Office Action, Kramer does not recite a recovery command that is configured to cause the other of the nodes to clear a latch-error. (Office Action, Page 3, Paragraph 2). Moreover, Kramer also does not recite the "link layer controller," as claimed in Claim 1. Instead, Kramer discloses 'bus controller units" that monitor each other. Column 4, Lines 4, Lines 38-50). However, Kramer does not recite that its "bus controller unit" is capable of encoding and decoding data, as claimed in Claim 1. Thus, Kramer does not recite, as claimed in Claim 1:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Second, the deficiencies of Kramer with respect to this element of Claim 1 are not remedied by Lu. Instead, Lu discloses a (Master Controller Processor) MCP unit 11 and a

backup MCP unit 12, and that "when the backup receives the first IS-IS (Protocol Data Unit) PDU on the synchronization-required interface, it sends a synchronization message to active and clears up its own synchronization-required flag." (Column 11, Lines 34-45). Applicants respectfully submit that a "synchronization message" that synchronizes two MCP units (11, 12) is not equivalent to "recovery command" that clears up a latch-up error in a bus interface circuit.

Additionally, even assuming, *in arguendo,* that a "synchronization message" is equivalent to a "latch-up error", Lu nevertheless does not disclose clearing up a latch up in a bus interface circuit, wherein the interface circuit includes, "a *physical layer controller* that sends and receives data on one of the plurality of busses, and a *link layer controller* that encodes and decodes the data." (Emphasis added). Indeed, there is nothing in Lu to indicate that the two identical MCP units (11, 12) perform different functions, such as the different functions produced by the "physical layer controller" and the "link layer controller."

Moreover, no other component disclosed by Kramer or Lu is equivalent to the "link layer controller," as recited in Claim 1. The Office Action states that "Lu discloses the method of the bus interface circuit includes a link layer controller and a physical layer controller (see fig. 4, DCE 7)." (Office Action, Page 7, Paragraph 1). However, Figures 4A and 4A of Lu does not disclose a "DCE 7." Instead, Figure 4A is a flow diagram depicting the three synchronization phases involved in HA IS-IS protection of the active MCP. (Figure 4A). Likewise, Figure 4B is a flow diagram depicting HA IS-IS first phase of initial synchronization. (Figure 4B). Thus, Lu also does not recite a "link layer controller" that is capable of encoding and decoding data that is sent and received by a "physical layer controller," as claimed in Claim 1.

Accordingly, the cited references to Kramer and Lu, whether individually or in combination, do not recite every element of Claim 1. Furthermore, because Claims 5-7 and 11 depend from Claim 1, they are also allowable over Kramer for at least the same reason Claim 1 is allowable, as well as for additional limitations recited in those claims.

Claims 21, 25-26, and 29

Claims 21, 25-26, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu. Claims 25-26 and 29 depend from Claim 21. Claim 21, as amended, recites:

> 21. A computer-readable medium containing instructions causing a program in a data processing medium to perform a method, the data processing system having a plurality of nodes operatively connected to a network having a plurality of busses, the method comprising:
>
> transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network;
>
> determining whether the first message was received by the other of the nodes on the first bus; and
>
> when it is determined that the first message was not received by the other of the nodes, transmitting a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses,
>
> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Applicants respectfully traverse the rejections. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(a). Accordingly, the cited references to Kramer and Lu, whether individually or in combination, do not recite, as claimed in Claim 21:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of*

busses, and a *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Thus, Claim 21 is allowable over Kramer. Furthermore, because Claims 25-26 and 29 depend from Claim 21, they are also allowable over Kramer for at least the same reason Claim 21 is allowable, as well as for additional limitations recited in those Claims.

Qian (U.S. Pub. 2005/0030926)

Qian discloses a method to ensure accurate reception of transmitted data by modulating pilot signal to convey information. (Paragraph 14, Lines 1-6). The pilot signal is transmitted at one of several selectable power levels to boost the effectiveness of a traffic signal. (Paragraph 8, Lines 1-25).

Claims 2-4

Claims 2-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Qian. Claims 2-4 depend from Claim 1. Claim 1, as amended, recites:

> 1. A method in a data processing system having a plurality of nodes operatively connected to a network having a plurality of busses, the method comprising:
> transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network;
> determining whether the first message was received by the other of the nodes on the first bus; and
> when it is determined that the first message was not received by the other of the nodes, transmitting a recovery command to the other of the nodes on a second of the plurality of busses,
> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus.

Applicants respectfully traverse the rejection. First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that the cited references to Kramer and Lu do not recite the method claimed in Claim 1.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Qian. Instead, Qian's disclosure is related to varying the transmission power levels of a Reverse Secondary Pilot Channel (R-SPICH) implemented in a wireless network based on the data rates of reverse packet data channels (R-PDCH). (Paragraph 8, Lines 1-25). Accordingly, the cited references to Kramer and Qian, whether individually or in combination, do not teach, disclose or fairly suggest, "wherein the recovery command is configured to cause the other of the nodes *to clear a latch-up error in a bus interface circuit* that operatively connects the other of the nodes to the first bus," as recited in Claim 1. (Emphasis added). Furthermore, since Claims 2-4 depend from Claim 1, they are least allowable for the same reason that makes Claim 1 allowable over the cited references.

Claims 22-23

Claims 22-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Qian. Claims 22-23 depend from Claim 21. Applicants respectfully traverse the rejection. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of Claim 21 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that the cited references to Kramer, Lu, and Qian, whether individually or in combination, do not disclose, teach, or fairly suggest, as recited in Claim 21:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer*

controller that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Furthermore, because Claims 22-23 depend from Claim 21, they are also allowable over the cited references to Kramer, Lu, and Qian for at least the same reason Claim 21 is allowable, as well as for additional limitations recited in those claims.

Engels (U.S. Pub. 2004/0213174)

Engels discloses selecting a coding and modulating method from a plurality of methods for transmitting a payload between a central station and a plurality of subscriber stations. (Paragraph 1, Lines 1-6). The method is carried by detecting the load of a transmission channel and making the selection based on the detected load. (Paragraph 4, Lines 1-10).

Claim 8

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Engels. Applicants respectfully traverse the rejection. Claim 8 depends from Claim 1. First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that Kramer and Lu do not recite the method claimed in Claim 1.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Engels. Instead, Engels' disclosures are related to a signaling time slot, "Slot 1" that includes a "Slot 2" that is formed of p sub-units, each consisting of a modem signaling section MS1,..., MSp, and a cell section C1 to Cp. (Paragraph 28, Lines 1-4; Paragraph 41, Lines 1-3; Paragraph 43, Lines 1-3; Figure 3). However, Engels is silent with respect to the clearing of latch-up errors in a bus interface circuit, as claimed in Claim 1. Accordingly, the cited references to Kramer, Lu,

and Engels, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 1:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Furthermore, since Claim 8 depends from Claim 1, it is at least allowable for the same reason that makes Claim 1 allowable over the cited references.

Claim 27

Claim 27 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Engels. Claim 27 depends from Claim 21. Applicants respectfully traverse the rejection. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of Claim 21 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that the cited references to Kramer, Lu, and Engels, whether individually or in combination, do not disclose, teach, or fairly suggest, a claimed in Claim 21:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Furthermore, since Claim 27 depends from Claim 21, it is at least allowable for the same reason that makes Claim 21 allowable over the cited references.

Ishida (U.S. 5,170,473)

Ishida discloses a communication command control system among a plurality of CPUs. (Column 2, Lines 59-63). The control system includes a control apparatus for transmitting an acknowledge signal to a request signal. (Column 2, Lines 64-69; Column 3, Lines 1-25).

Claim 9

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Ishida. Claim 9 depends from Claim 1. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(s). Accordingly, Applicants respectfully submit that Kramer and Lu do not recite the method claimed in Claim 1.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Ishida. Instead, Ishida discloses that a command data issued from a CPU is transmitted via the same path as the request to destination judging circuit 46. (Column 4, Lines 67-68; Column 5, Lines 1-4). However, Engels is silent with respect to the clearing of latch-up errors in a bus interface circuit, as claimed in Claim 1. Accordingly, the cited references to Kramer, Lu, and Ishida, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 1:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Furthermore, since Claim 9 depends from Claim 1, it is at least allowable for the same reason that makes Claim 1 allowable over the cited references.

Moreover, Claim 9 is further allowable over the cited references to Kramer and Ishida because the cited references do not teach, disclose or fairly suggest, "sending a second message to the other of the nodes on the first bus *if the first message is not received by the other of the nodes*," as recited in Claim 9. As noted by the Examiner, Kramer does not disclose the subject matter of Claim 9. (Office Action, Page 8, Paragraph 3). Moreover, the deficiencies of Kramer are not remedied by Ishida. Instead, while Ishida discloses that a command data issued from a CPU is transmitted via the same path as the request to destination judging circuit 46, it does not disclose that its command data is issued only if a first message is not received. (Column 4, Lines 67-68; Column 5, Lines 1-4). Accordingly, Claim 9 is further allowable.

Claim 10

Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Kim. Claim 10 depends from Claim 1. Applicants respectfully traverse the rejection First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that Kramer and Lu do not recite the method claimed in Claim 1.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Kim. Instead, Kim's disclosures are related to interrupting power to the power output ports in response to detecting an *overcurrent flow* from a USB hub unit to other devices. (Column 1, Lines 19-22; Column 2, Lines 13-40). Thus, Kim does not disclose transmitting a recovery command. Accordingly, the cited references to Kramer, Lu, and Kim, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 1:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer*

controller that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Furthermore, since Claim 10 depends from Claim 1, it is at least allowable for the same reason that makes Claim 1 allowable over the cited references.

Claim 12

Claim 12 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu, and further in view of Ohyama. Claim 12 depends from Claim 1. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully submit that Kramer and Lu do not recite the method claimed in Claim 1.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Ohyama. Ohyama discloses a DCE 7 that is configured to receive a "DC interrupted current" from a "interrupted current generating circuit 14" via lines L1 and L2, which is used to trigger relays RL2-1 and RL2-4. (Column 3, Lines 50-54; Column 4, Lines 25-33; Figure 8). The Office Action states that "the DCE comprises two ports where the first port or the physical layer controller supplies the L1 signal, and the second port or the link layer controller supplies the L2 signal and (see Column 4, lines 25-33, see fig 8)." (Office Action, Page 11, Lines 3-6). However, while Ohyama discloses that DCE 5 and DCE 7 are connected by lines L1 and L2, Ohyama does not specifically mention ports. Moreover, even assuming, *in arguendo,* that two ports are present on a DCE as disclosed by Ohyama to receive signals L1 and L2, Ohyama nevertheless still does not recite a physical layer controller that "sends and receives data" and a link layer controller "that encodes and decodes data," as claimed in Claim 1. Indeed, there is nothing in Ohyama to suggest that there are distinct "ports," or that the ports include controllers that provide different

functions. Accordingly, the cited references to Kramer, Lu, and Ohyama, whether individually or in combination, do not teach, disclose or fairly suggest, as recited in Claim 1:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes the data*. (Emphasis added).

Furthermore, since Claim 12 depends from Claim 1, it is at least allowable for the same reason that makes Claim 1 allowable over the cited references.

Claims 24 and 28

Claims 24 and 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Lu, and further in view of Ohyama. Claims 24 and 28 depend from Claim 21. Applicants respectfully traverse the rejection. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of Claim 12 under 35 U.S.C. §103(a). Accordingly, the cited references to Kramer, Lu, and Ohyama, whether individually or in combination, do not recite, as claimed in Claim 21:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and a *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Thus, Claim 21 is allowable over Kramer. Furthermore, because Claims 24 and 28 depend from Claim 21, they are also allowable over the cited references for at least the same reason Claim 21 is allowable, as well as for additional limitations recited in those claims.

Claims 13-14, 16-17, and 19-20

Claims 13-14, 16-17, and 19-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Ohyama. Claims 14, 16-17 and 19-20 depend from Claim 13. Claim 13, as amended, recites:

> 13. A data processing system, comprising:
> a network having a plurality of busses;
> a plurality of nodes operatively connected to the plurality of busses of the network;
> means for transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network;
> means for determining whether the first message was received by the other of the nodes on the first bus; and
> means for transmitting a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses in response to determining that the first message was not received by the other of the nodes,
> wherein the other of the nodes comprises a bus interface circuit operatively connecting the other node to the first bus, the bus interface circuit including a physical layer controller that sends and receives data on one of the plurality of busses, and a link layer controller that encodes and decodes the data; and
> a means for interrupting power to the bus interface circuit, the means for interrupting power configured to at least interrupt a current flow from the link layer controller to the physical layer controller in response to the recovery command.

Applicants respectfully assert traverse the rejection. First, as noted in Office Action, Kramer does not recite, as claimed in Claim 13:

> wherein the other of the nodes comprises a bus interface circuit operatively connecting the other node to the first bus, the bus interface circuit including a *physical layer controller* that *sends*

and receives data on one of the plurality of busses, *and a link layer controller* that *encodes and decodes the data*; and

a means for interrupting power to the bus interface circuit, the means for interrupting power configured to at least *interrupt a current flow from the link layer controller to the physical layer controller* in response to the recovery command. (Emphasis added).

(Office Action, Page 13, Paragraph 2).

Second, the deficiencies of Kramer are not remedied by Ohyama. Ohyama discloses a DCE 7 that is configured to receive a "DC interrupted current" from a "interrupted current generating circuit 14" via lines L1 and L2, which is used to trigger relays RL2-1 and RL2-4. (Column 3, Lines 50-54; Column 4, Lines 25-33; Figure 8). The Office Action states that "the DCE comprises two ports where the first port or the physical layer controller supplies the L1 signal, and the second port or the link layer controller supplies the L2 signal and (see Column 4, lines 25-33, see fig 8)." (Office Action, Page 11, Lines 3-6). However, while Ohyama discloses that DCE 5 and DCE 7 are connected by lines L1 and L2, Ohyama does not specifically mention ports. Moreover, even assuming, *in arguendo,* that two ports are present on a DCE as disclosed by Ohyama to receive signals L1 and L2, Ohyama nevertheless still does not recite a physical layer controller that "sends and receives data" and a link layer controller "that encodes and decodes data," as claimed in Claim 1. There is nothing in Ohyama to suggest that there are distinct "ports", or that the ports include controllers that provide different functions.

Accordingly, the cited references to Kramer and Ohyama, whether individually or in combination, do not teach, disclose or fairly suggest, as recited every element of Claim 13. Furthermore, since Claims 14, 16-17, and 19-20 depends from Claim 13, it is at least allowable for the same reason that makes claim 13 allowable over the cited references.

Claims 31-34

Claims 31-34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Ohyama. Claims 32-34 depend from claim 31. Claim 31, as amended, recites:

> 31. A data processing apparatus, comprising:
> a plurality of network interface cards operatively configured to connect to a network having a plurality of busses, each network interface card having a bus interface circuit operatively configured to connect to a respective one of the plurality of busses;
> a memory having a program that periodically transmits a first message to at least one of a plurality of nodes operatively connected to a first of the plurality of busses of the network, determines whether the first message was received by the other of the nodes on the first bus, and transmits a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses in response to determining that the first message was not received by the other of the nodes,
> wherein the recovery command is configured to cause the other of the nodes to reinitialize a bus interface circuit operatively connected to the other of the nodes to the first bus by commanding a means for interrupting power to at least interrupt a current flow from a power bus to a physical layer controller of the bus interface circuit in response to the recovery command, *the physical layer controller to send and receive data, and initialize and arbitrate communication on the respective one of the plurality of busses*; and
> a processing unit for running the program. (Emphasis added).

Applicants respectfully assert traverse the rejection. First, as noted in Office Action, Kramer does not recite, as claimed in Claim 31:

> wherein the recovery command is configured to cause the other of the nodes to reinitialize a bus interface circuit operatively connected to the other of the nodes to the first bus by commanding a means for interrupting power to at least interrupt a current flow from a power bus to a physical layer controller of the bus interface circuit in response to the recovery command, *the physical layer controller to send and receive data, and initialize and arbitrate communication on the respective one of the plurality of busses.* (Emphasis added).

(Office Action, Page 16, Paragraph 2).

Second, the deficiencies of Kramer are not remedied by Ohyama. Ohyama discloses a DCE 7 that is configured to receive a "DC interrupted current" from a "interrupted current generating circuit 14" via lines L1 and L2, which is used to trigger relays RL2-1 and RL2-4. (Column 3, Lines 50-54; Column 4, Lines 25-33; Figure 8). The Office Action states that "the DCE comprises two ports where the first port or the physical layer controller supplies the L1 signal, and the second port or the link layer controller supplies the L2 signal and (see Column 4, lines 25-33, see fig 8)." (Office Action, Page 11, Lines 3-6). However, while Ohyama discloses that DCE 5 and DCE 7 are connected by lines L1 and L2, Ohyama does not specifically mention ports. Moreover, even assuming, *in arguendo,* that two ports are present on a DCE as disclosed by Ohyama to receive signals L1 and L2, Ohyama nevertheless still does not recite a physical layer controller, such as a physical layer controller that "sends and receives data" and "and initialize and arbitrate communication on the respective one of the plurality of busses," as claimed in Claim 31. Since Ohyama does not recite a "physical layer controller," Ohyama cannot recite a recovery command to "interrupt a current flow from a power bus to a physical layer controller," as claimed in Claim 31.

Accordingly, the cited references to Kramer and Ohyama, whether individually or in combination, do not teach, disclose or fairly suggest, as recited every element of Claim 31. Furthermore, since Claims 32-34 depends from Claim 31, it is at least allowable for the same reason that makes Claim 31 allowable over the cited references.

Kim (U.S. 6,064,554)

Kim discloses an overcurrent protection circuit for a universal serial bus (USB) hub unit. (Column 2, Lines 7-11). The protection circuit includes a plurality of overcurrent detectors respectively connected between the power switches and the power output ports, a plurality of signal transfer/power interruption controllers. (Column 2, Lines 13-40).

Claims 15 and 18

Claims 15 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Ohyama, and further in view of Kim. Claims 15 and 18 depend from Claim 13. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 13 under 35 U.S.C. §103(s). Accordingly, Applicants respectfully submit that Kramer and Ohyama do not recite the method claimed in Claim 13.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Kim. Kim's disclosures are related to interrupting power to the *power output ports* in response to detecting an overcurrent flow. (Column 2, Lines 13-40). However, Kim does not disclose a bus interface circuit that includes a "physical layer controller" and a "link layer controller," nor does Kim disclose interrupting current flow from the "link layer controller" to the "physical layer controller". Accordingly, the cited references to Kramer, Ohyama, and Kim, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 13:

> wherein the other of the nodes comprises a bus interface circuit operatively connecting the other node to the first bus, the bus interface circuit including a *physical layer controller* that *sends and receives data* on one of the plurality of busses, *and a link layer controller* that *encodes and decodes the data*; and
> a means for interrupting power to the bus interface circuit, the means for interrupting power configured to at least *interrupt a current flow from the link layer controller to the physical layer controller* in response to the recovery command. (Emphasis added).

Furthermore, since Claims 15-18 depends from Claim 13, they are at least allowable for the same reason that makes claim 13 allowable over the cited references.

Claim 30

Claim 30 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Lu and Ohyama, and further in view of Lewis. Claim 30 depends from Claim 21. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 21 under 35 U.S.C. §103(s). Accordingly, Applicants respectfully submit that Kramer, Lu, and Ohyama do not recite the method claimed in Claim 21.

Second, Applicants respectfully submit that the deficiencies of Kramer are not remedied by Lewis. Lewis discloses a communication network that includes a control node that is capable of generating an initialization control reply message to "a foreign agent", wherein the message includes a secret key. (Column 10, Lines 40-60). However, Lewis is silent with respect to latch-up errors. Accordingly, the cited references to Kramer, Ohyama, and Kim, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 21:

> wherein the recovery command is configured to cause the other of the nodes to clear a latch-up error in a bus interface circuit that operatively connects the other of the nodes to the first bus, each node of the bus interface circuit including a *physical layer controller* that *sends and receives data on one of the plurality of busses*, and the *link layer controller* that *encodes and decodes* the data. (Emphasis added).

Furthermore, since Claim 30 depends from Claim 21, it is at least allowable for the same reason that makes Claim 21 allowable over the cited references.

Lewis (U.S. 7,193,985)

Lewis discloses a method for providing Internet Protocol communication services to a mobile client. (Abstract). The method includes determines a foreign agent to provide communication services to the mobile client based on a mobile client information record, a radio node record, and a plurality of foreign agent records associated with the radio node. (Abstract).

Claim 36

Claim 36 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer, in view of Lu and Ohyama, and further in view of Lewis. Claim 36 depends from Claim 31. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 31 under 35 U.S.C. §103(s). Accordingly, Applicants respectfully submit that Kramer and Ohyama do not recite the method claimed in Claim 31.

Second, the deficiencies of Kramer are also not remedied by Lu. Instead, Lu discloses a (Master Controller Processor) MCP unit 11 and a backup MCP unit 12, and that "when the backup receives the first IS-IS (Protocol Data Unit) PDU on the synchronization-required interface, it sends a synchronization message to active and clears up its own synchronization-required flag." (Column 11, Lines 34-45). Applicants respectfully submit that a "synchronization message" that synchronizes two MCP units (11, 12) is not equivalent to "recovery command" that clears up a latch-up error in a bus interface circuit.

Third, the deficiencies of Kramer are also not remedied by Lewis. Lewis discloses a communication network that includes a control node that is capable of generating an initialization control reply message to "a foreign agent", wherein the message includes a secret key. (Column 10, Lines 40-60). However, Lewis is silent with respect to latch-up errors.

Accordingly, the cited references to Kramer, Lu, Ohyama, and Kim, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 31:

> wherein the recovery command is configured to cause the other of the nodes to reinitialize a bus interface circuit operatively connected to the other of the nodes to the first bus by commanding a means for interrupting power to at least interrupt a current flow from a power bus to a physical layer controller of the bus interface circuit in response to the recovery command, *the physical layer controller to send and receive data, and initialize and arbitrate communication on the respective one of the plurality of busses.* (Emphasis added).

Furthermore, since Claim 36 depends from Claim 31, it is at least allowable for the same reason that makes Claim 31 allowable over the cited references.

Claim 35

Claim 35 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kramer in view of Lu and Ohyama, and in further view of Engels. Claim 35 depends from Claim 31. Applicants respectfully traverse the rejection.

First, Applicants incorporate the reasoning presented above in response to the rejection of Claim 31 under 35 U.S.C. §103(s). Accordingly, Applicants respectfully submit that Kramer and Ohyama do not recite the method claimed in Claim 31.

Second, the deficiencies of Kramer are also not remedied by Lu. Instead, Lu discloses a (Master Controller Processor) MCP unit 11 and a backup MCP unit 12, and that "when the backup receives the first IS-IS (Protocol Data Unit) PDU on the synchronization-required interface, it sends a synchronization message to active and clears up its own synchronization-required flag." (Column 11, Lines 34-45). Applicants respectfully submit that a "synchronization message" that synchronizes two MCP units (11, 12) is not equivalent to "recovery command" that clears up a latch-up error in a bus interface circuit.

Third, the deficiencies of Kramer are also not remedied by Engels. Instead, Engels' disclosures are related to a signaling time slot, "Slot 1" that includes a "Slot 2" that is formed of p sub-units, each consisting of a modem signaling section MS1,..., MSp, and a cell section C1 to Cp. (Paragraph 28, Lines 1-4; Paragraph 41, Lines 1-3; Paragraph 43, Lines 1-3; Figure 3). However, Engels is silent with respect to bus interface circuits that include physical layer controllers and interrupting power to physical layer controllers.

Accordingly, the cited references to Kramer, Lu, Ohyama, and Engels, whether individually or in combination, do not teach, disclose or fairly suggest, as claimed in Claim 31:

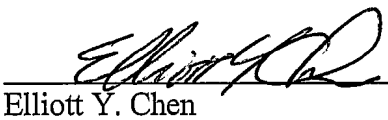
> wherein the recovery command is configured to cause the other of the nodes to reinitialize a bus interface circuit operatively connected to the other of the nodes to the first bus by commanding a means for interrupting power to at least interrupt a current flow from a power bus to a physical layer controller of the bus interface circuit in response to the recovery command, *the physical layer controller to send and receive data, and initialize and arbitrate communication on the respective one of the plurality of busses*. (Emphasis added).

Furthermore, since Claim 35 depends from Claim 31, it is at least allowable for the same reason that makes Claim 31 allowable over the cited references.

CONCLUSION

Applicant respectfully requests that the above-proposed amendments be entered and that pending Claims 1-36 be allowed. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully Submitted,

Dated: 3-19-08 By: 

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